

**FY2013 SCBGP-FB
Annual Performance Report
South Dakota Department of Agriculture
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PROJECT COORDINATOR:

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE
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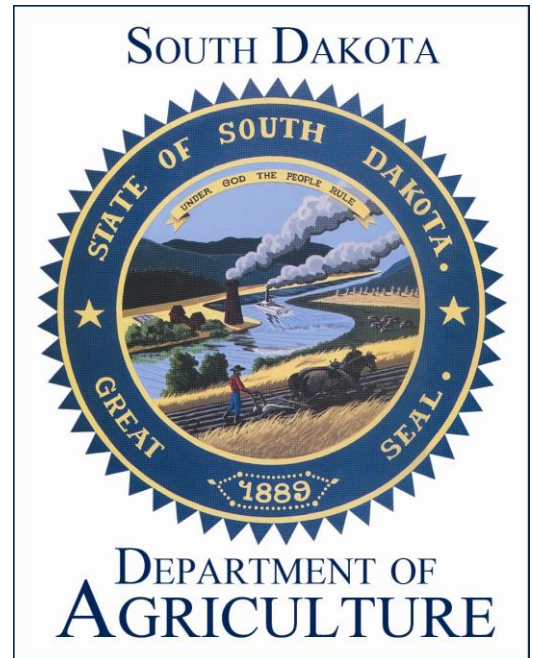


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Project 1

Title – Cultivar Ripening Parameter Profiles and Preharvest Grape Ripening Parameter Training Workshop

Subgrantee: South Dakota State University

Contact Person – Anna Fennell

Project Summary:

Grape production is a new industry in South Dakota and the cultivars grown have been available less than twenty years. It is therefore critical to provide growers and wineries fruit ripening chemistry information to better manage harvest decisions and provide benchmarking information for cultivar performance. In the past five years the number and acres of vineyards in South Dakota have increased significantly, with 150 to 200 acres in production and >80 growers. Many growers are new to viticulture and need a better understanding of how to monitor preharvest fruit quality and make harvest decisions. In addition, the majority of cultivars have been in production less than 20 years and there is limited information fruit chemistry development (particularly malic and tartaric acid biosynthesis and catabolism) during berry ripening and harvest parameter information for growers to use to benchmark their own fruit ripening. Many growers leave fruit hang hoping for a decrease in acid. Leaving fruit hang can result in high sugar grapes and decrease in quality and yield due to water loss and bird predation. This project was aimed at educating growers in preharvest parameter measurements and provide critical information on cultivar fruit quality performance in South Dakota.

Project Approach:

Annual workshops were developed to provide growers training in sampling and measuring preharvest fruit ripening parameters (Brix, pH and titratable acids) and identifying negative and positive fruit quality traits. Guest speakers were invited from other regions for a Wine Fruit Growing Workshop. Presentations were also made at the South Dakota Wine Grower and South Dakota Specialty Producer Association meetings. An online-learning website was established and undergraduates were trained in fruit sampling and harvest parameters in SDSU research vineyard and cooperating growers vineyards. Fruit ripening profiles were monitored for the most commonly grown cultivars: Frontenac, Marquette, Frontenac Gris and Brianna.

Goals and Outcomes Achieved:

- 1) Train grape growers in preharvest berry ripening parameters and viticulture practices.
 - a. Five workshops or field days were conducted and reached 99 participants. Six speakers in addition to presentations by R. Burrows and A. Fennell were provided for these workshops.
 - b. On-line training reached 30 participants in year 1 and ongoing list-serve has reached 111 growers.
 - c. Training sessions were conducted in vineyard sites for cooperating growers each year.
- 2) Develop ripening profile for cultivars recommended for SD and North Central Plains.
 - a. Seasonal profiles of Frontenac, Frontenac Gris, Marquette and Brianna were documented and presented at grower meetings. This data was also presented at regional meetings in Michigan, Minnesota and New York with >60 people at each presentation. Regional meetings had attendance from 12 states.

- 3) Train students in lab techniques and grower outreach
 - a. Four student interns were trained in fruit quality management and correct fruit sampling procedures. Students met with cooperating grower and collected samples.
 - b. Training sessions in fruit quality parameters were conducted in Brookings vineyard for 30 to 40 undergraduate students annually.
- 4) Develop Cultivar ripening parameters publication
 - a. Results are being summarized and publication is out of scope of the grant time frame.
 - b. Three publications that relate to production of fruit quality were produced:
Burrows, R., Bender, A., Fennell, A., Thaden, B. 2016. Overhead Netting for Commercial Vineyards and Orchards. 7 pages SDSU Extension 06-2003-2016.
Burrows, R., Fennell, A. 2015. Grape varieties for South Dakota. SDSU Extension 06-2000-2016.
Burrows, R. 2015. Black rot and Downy mildew. Igrow.org

Beneficiaries:

- 1) Undergraduate student: 4 student interns received viticulture and fruit quality training. 100 students gained background information in fruit ripening and quality for wine production.
- 2) >100 grape growers in SD were reached.
- 3) >200 growers attending conferences in Michigan, Minnesota and New York.

Lessons Learned:

- 1) Growers are not collecting large enough samples or uniformly sampling their vineyards for fruit testing. There is a tendency to focus on visible fruit that is more sun exposed thus overestimating the fruit maturity.
- 2) Measurement of titratable acids is not routine amongst growers because of the measurement time and need for fresh reagents.
- 3) Presentation of canopy management, management impacts on fruit quality and sampling procedures resulted in 75% of surveyed growers at Wine Fruit Growing Workshop indicated that they would make changes in their management procedures.
- 4) A number of growers are switching away from VSP to increase yield and fruit quality in response to presentations made in workshops for this grant and from the Northern Grape Project webinar.
- 5) Unexpected lesson: Polar vortex conditions provided a true test of the cultivars and justified the emphasis that has been made to growers about site and cultivar selection.

Contact Person: Anne Fennell

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Project 2

Title – State Wine Pavilion

Subgrantee: South Dakota Department of Agriculture

Contact Person – Jodi Bechard

Final Report

Project Summary

The South Dakota Department of Agriculture along with the South Dakota wine industry hosted the SD Wine Pavilion at the 2014 SD State Fair. This is the eighth year we have held a wine pavilion at the State Fair. It has been very successful based on the number of people attending the wine pavilion and tasting South Dakota wines. Anecdotally we have also heard good comments from the participants, who ask us to bring the pavilion back to the fair every year. We also have many repeat customers.

Project Approach

SDDA hired a contractor to plan the wine pavilion, including contacting wineries, hiring staff, promoting the event, etc. SDDA and the event contractor hold regular conference calls to keep the project on track. The contractor is responsible for hiring staff, ascertaining any required licenses, providing financial accounting and inventory systems, and working with the wineries to discuss participation and available wines.

SDDA provides oversight and approval of contractor's activities.

The wine pavilion took place during the South Dakota State Fair on August 27 – September 1, 2014. Twelve South Dakota wineries participated in the five day event. The event is set up so that consumers can sample a variety of South Dakota wines. We had 32 varieties of wine available and had all of them available every day for consumers to sample. We had five regular tasting stations set up – each one featuring a different type of wine (red, sweet red, white and 2 fruit stations). Professional staff describe and sample the wine to consumers.

Once consumers sample the wine, there is a retail area where they can purchase wines by the glass to enjoy in the wine garden; or they can purchase a bottle of wine to take home with them.

Goals and Outcomes Achieved

We had over 4,000 people visit the wine pavilion and sample SD wine. We counted people by the number of tasting tickets that were purchased. There were certainly other people who walked through the wine pavilion but did not sample wine. We do not have an accurate way to count those people. In 2014, the Department of Agriculture went through some staff changes. In previous years, we have taken surveys from the Win Pavilion, but this was not done for 2014.

Beneficiaries

The wines at the event represented the following specialty crops: grapes, aronia berries, cherries, crab apples, rhubarb, raspberries, apples, black currants, strawberries, cranberries, honey, and peaches.

We also partnered with various commodity organizations to pair the wine with South Dakota food including beef, pork, turkey, cheese and lamb. We made an increased effort to pair wine with South Dakota cheese this year. All food paired with the wine was donated by various commodity groups, organizations and businesses. We had cheese available from each of the state's seven cheese manufacturers. We worked with the SD Beef Industry Council, South

Dakota Pork Producers Council, Dakota Provisions, Midwest Dairy Association and the South Dakota Sheepgrowers Association. All food paired with the wine was donated and no Specialty Crop Block Grant funds were used for purchasing food.

Lessons Learned

This has been a very beneficial project for South Dakota's wine industry. Some of the lessons we have learned along the way include keeping the activities of the wine pavilion simple and focused. There are many activities and other opportunities that can be added along and for each of them, we have asked the question, "Will this help enhance South Dakota's specialty crop and wine industries?" If the answer is no or if that activity will take the focus off of the wine industry, then we don't add those additional activities or opportunities.

We have also learned that having the right partnerships greatly enhances this event. State Fair staff have been fantastic to work with; the wineries have been great to work with and accommodating of changes we have made. Other industry groups have also helped us increase the value of the wine pavilion to our guests.

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Project 3

Title – Production and Utilization of Field Peas, Lentils and Chickpeas in South Dakota

Subgrantee: The South Dakota Pulse Growers Inc.

Contact Person – Ruth Beck

Final Report

Project Summary:

Field peas, lentils, and chickpeas have been successfully grown in South Dakota for more than 20 years. Planted acres have fluctuated between 4,500 to 24,000 acres per year over that period. Despite production success, acres of peas and lentils have not substantially increased in South Dakota.

One of the reasons behind the slow expansion of these crops is that there are very few markets for them in South Dakota. If producers want to sell field peas, lentils, or chickpeas, it often involves more steps than just taking the product to the local elevator. Marketing options are very limited in South Dakota and most established producers sell their product across state lines.

In 2012 an investment drive was undertaken in South Dakota to raise money to build a pea and lentil processing plant in central South Dakota. The goal being to provide a local market for pea and lentil producers. The effort was successful and the processing plant will begin operating in the fall of 2016.

The success of the processing plant will in part be dependent on increasing planted acres of these crops. This grant focused on (1) providing education and educational tools for new growers of field peas, chickpeas and lentils in order to increase their success when growing these crops; (2) increasing marketing and consumption of South Dakota produced products in South Dakota.

Project Approach

Two videos were produced with funds from this grant. The videos are “Growing Field Peas-Seeding” and “Growing Field Peas-Harvest”. Contributing to the videos were Dwayne Beck, Manager of the SDSU Dakota Lakes Research Farm and Leesman Ranches from Canning, SD. The videos were produced with the experienced assistance of the iGrow video team.

A publication titled “Production and Utilization of Field Peas in South Dakota” was published in 2015. This is available on line at <http://igrow.org/up/resources/03-2004-2015.pdf>. This publication is coauthored by Dr. Adam J. Varenhorst, Dr. Anitha Chirumamilla, Dr. Dwayne L. Beck, and Ruth Beck.

Field tours were held during the summers of 2013, 2014 and 2016. Producers who attended the tours had the opportunity to view variety trials in the field and learn about production issues from SDSU extension staff.

A field pea and lentil production school was held in January 2016. Speakers were brought in from South and North Dakota to cover all aspects of pea and lentil production in South Dakota.

In addition to the above activities, the SD Pulse Growers, with support from the Special Crop Block Grant, have been able to sponsor knowledgeable speakers at the Ag Horizons Conference in 2013, 2014, 2015.

The South Dakota Pulse Growers had display booths at the School Nutrition Association of South Dakota’s (SNASD) annual conferences in 2013, 2014 and 2015. In 2013 the SNASD provided some trainings to school lunch staff that included a culinary segment on legumes. The SD Pulse Growers Inc. provided the organizers of these trainings with recipes. Below is the list of recipes that were prepared during the trainings.

- Spaghetti el lentils
- Split Pea Salsa
- Ancini Dea Pea Confetti Salad
- Zesty Pizza sub
- South of the border taco
- Veggie dip

This list was provided to me by Sandy Kramer, who was the Director of Food Service in the Yankton School District at that time. She oversaw the trainings.

The SD Pulse Growers, Inc also hosted booths at the Ag Horizons Conference in 2013 and 2015 and the Brown County Fair (2014 & 2015).

The booths at the SDASN conferences were designed and staffed by Marg Zastrow, SDSU Food Nutrition Field Specialist (retired). She also staffed the booth at the 2013 Ag Horizons Conference and The Brown County Fair. The booth at the 2015 Ag Horizons Conference was staffed by members of The SD Pulse Growers, Inc.

Recipes with pea and lentil ingredients were prepared and distributed at all events with booths.

Goals and Outreach Achieved

The videos are available at the SDSU iGrow UTube channel or at the following links; <https://www.youtube.com/watch?v=Dusz2WddRTE> and <https://www.youtube.com/watch?v=QoC-v3LuC2M>. At the time of writing this report the seeding video has been viewed 2518 times and the harvest video has been viewed 3188 times. Although no specific number is available, the publication “Production and Utilization of Field Peas and Lentils in South Dakota” has been distributed widely over the past two years. It is currently available in pdf form on line at SDSU Extension’s iGrow.org website. The information generated from field pea variety trials is a valuable tool for producers. Field tours held in 2014 & 2016 included presentations from SDSU extension staff on pest issues that might affect pea and lentil growers. A total of about sixty interested producers attended the variety tours in 2014 & 2016.

Over 100 producers attended the field pea and lentil production event held in January 2016. Below is a picture of the event. Attached is an agenda.



Attendance was not documented at pea and lentil related presentations at the Ag Horizons Conference. However, it was felt that attendance was good. Speakers did an excellent job of presenting information regarding disease prevention and weed control to local producers. The result of these activities is that there are tools available for producers from South Dakota to guide them in the successful production of peas and lentils. This work was accomplished through the joint efforts of The South Dakota Pulse Growers, The SD Pulse Council, staff from the SDSU Extension Service and the SDSU Ag Experiment Station and veteran producers.

Measurable Outcomes

Acres of lentils and peas have increased from 2013, when they were approximately 20,000 to 2016 when they were recorded at 41,000.

(<http://www.fsa.usda.gov/FSA/webapp?area=newsroom&subject=landing&topic=foi-er-fri-cad>)

The goal of placing promotion booths at the School Nutrition Association (SNASD) of SD conferences was to raise awareness among school food preparation professionals to the benefits of including peas and lentils in school lunches. The SDSU Nutrition Food Specialist distributed brochures and free cookbooks to attendees of the conference. She also prepared and distributed samples of Split Pea Salsa.

Comments received:

What a great way to stretch you beef to make it look like they are getting more.

They discussed pureeing or blending in the lentils more so they don't notice them as much.

They really had fun making these recipes and they turned out great.

Sandi K

The grant proposal included documenting outcomes by distributing a survey at the production school. A survey was prepared. However, the event attendance was so much larger than expected that the organizer inadvertently forgot to distribute the survey. The SD Pulse Growers successfully accomplished all other activities proposed in the grant application. The activities performed were timed very well to align with interest and growth in field pea and lentil production.

Beneficiaries

It is the goal and hope of the SD Pulse Growers, Inc. and the coordinators of this grant, that South Dakota will benefit from a thriving pea and lentil production industry. Producers will have more crop options available to them. These crops are well adapted to production in dryer regions of South Dakota, as compared to other common annual legume crop options. Legumes fix their own nitrogen and are therefore an energy efficient crop option. Crop rotation is an important production practice and helps producers to break the cycle of pests that can become problems in monocultures. Crop rotation is also a recommended practice for successful no till crop management. No till crop production is a popular production method in central and western South Dakota because it reduces erosion and helps to improve soil and water quality. Increasing crop options for producers, diversifies farm operations and improves long term resilience for South Dakota's agriculture industry. Short term outcomes include providing information and tools to new and young producers who want to diversify and include alternative crops on their farm. Long term impacts include improving resilience and building diversity and depth into South Dakota's ag industry.

Lessons Learned

The pea and lentil production meeting was initially planned to happen during the first year of the grant or during the winter of 2014. This meeting occurred during the winter of 2016. The 2016-time frame corresponded better with the opening of the pulse processing plant. It can be beneficial to have some flexibility within the plan.

Enlist more help during meetings so surveys are distributed.

Contacts:

Brad Karlen, president, SDPGA

Leo Vojta, board member, SDPGA

Terry Ness, board member, SDPGA

Marv Schumacher, board member, SDPGA
Raleigh Leesman, board member, SDPGA



Booth at 2014 SDASN Conference.



Field Pea Variety Plot Tour

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Project 4

Title – Fruit & Vegetable Enhancement of Interventions

Subgrantee: South Dakota Department of Health

Contact Person – Nikki Prosch & Larrissa Skjonsberg

Final Report

Project Summary

There is an existing body of nationally based research pointing to fruit and vegetable consumption patterns which identifies South Dakota as having low percentages of vegetable and fruit consumption. A South Dakota specific research project, with support from the Specialty Crop Block Grant (SCBG) in 2011, assisted in the identification of specific resistance points among fruit and vegetable consumption of South Dakotans and was a catalyst for the development of interventions to improve the consumption of fruits and vegetables across the state.

Results from the South Dakota research helped streamline messaging and assisted in action planning for fruit and vegetable promotion in South Dakota, specifically the action planning in the 2012 SCBG application. A result of the SCBG funding from 2012 was the development of a fruit and vegetable stakeholder group. This group guided the activities and objectives outlined in the 2013 SCBG application.

The 2013 SCBG project enhanced and expanded strategies and interventions of the South Dakota Department of Health fruit and vegetable initiatives. Some specific interventions included the statewide YUM! social media campaign, Munch Code (*healthy concessions*) campaign, and Harvest of the Month (HOM) education materials. Interventions from SCBG funds of 2013 enhanced statewide media messaging and further expanded work of the South Dakota Department of Health in fruit and vegetable promotion.

Project Approach

During the project period April 2013 – present, the South Dakota Department of Health Nutrition & Physical Activity (DOH NPA) team performed all activities outlined in the original application. In April-May 2013, the DOH NPA team convened to develop the work plan and actions items for the Fruit and Vegetable Enhancement of Interventions project. In May-August 2013 the DOH NPA team determined the evaluation and prioritized which interventions to move forward during the project period.

In early September, the DOH NPA team and our partners determined to enhance and move forward the interventions **listed below**. Primarily the focus for the project period was to enhance mass media messaging across the state, through social media, online resources and television ads. During the project period, our partners contributed greatly to the success of these interventions. In the **table below**, partners who contributed to each specific intervention are listed.

Project Activity	Intervention Reach	Contributing Project Partners
YUM! Facebook	Reach: 2,680,701	South Dakota Department of

Page	Social Reach: 870,158	Education, Alliance for a Healthier Generation, Hot Pink Inc. Media Firm
HOM Program Enhancement	Visits: 26,376 Unique Visitors: 20,788	South Dakota Discovery Center, SDSU Extension, South Dakota Department of Education- Child and Adult Nutrition Program, Great Plains Tribal Chairmen's Health Board, Hot Pink Inc. Media Firm
Munch Code Facebook Campaign	Reach: 1,883,785 Social Reach: 418,388	Alliance for a Healthier Generation, South Dakota Department of Education, City of Sioux Falls Park and Recreation, SDSU Extension, Hot Pink Inc. media firm
Fruit & Vegetable television ad	East River South Dakota Number of viewers: 272,500 Media impressions: 341,715,000 West River South Dakota Number of viewers: 104,800 Media impressions: 131,419,200	Fruit and Vegetable Stakeholders Group and Hot Pink Inc. Media Firm

*Reach – defined as the number of people our ad was served to

*Social Reach – defined as the number of people ad served to, including social interactions

*Unique Visitors – defined as users who have seen any content associated with a page

A few significant contributions to the success of this project were given from the HealthySD Stakeholders and the fruit and vegetable stakeholder group, which encompasses a large group of our statewide partners. Individuals from South Dakota Department of Education, SDSU Extension, Hot Pink Inc. Media, South Dakota Discovery Center and the Alliance for a Healthier Generation contributed significantly to the success of the Harvest of the Month program enhancement and the statewide fruit and vegetable messaging. Further, individuals from Hot Pink Inc. Media, South Dakota Department of Education, City of Sioux Falls Park and Recreation, Alliance for a Healthier Generation and SDSU Extension contributed to the success of the social media messaging, television ads and other fruit and vegetable media messaging.

SDSU extension expanded the HOM program to involve grocery stores and developed the [Pick it! Try it! Like it!](#) program. Their efforts enhanced and expanded messaging and programming on consuming fruit and vegetables and buying them locally. Additionally, the South Dakota Discovery Center continues to offer training and implement the HOM program statewide. They continue to develop fruit and vegetable curriculum for early education, elementary and middle school settings, along with offering training and implementation. They have also been a key partner in promoting the program at various statewide conferences through breakout sessions on the program or sponsorship of conference booths. The Alliance for a Healthier Generation has also been key in promoting the program with the schools they work with across the state to improve school wellness policy and improved school environment.

Through periodic conference calls and face-to-face meetings, the DOH NPA team and our partners were able to coordinate and monitor the interventions of the project listed in the table above. Our DOH NPA team and our partners continually work on fruit and vegetable specific interventions and messaging statewide. Through applicant matching funds, the fruit and

vegetable interventions listed above, and some not listed, are continually implemented by the DOH NPA and our partners.

Goals and Outcomes Achieved

Goal	Performance Measure	Benchmark	Target
Increase to 28% fruit intake & increase vegetable intake to 11%	BRFSS data	2011 BRFSS data 26.3%-fruit 9.4%-vegetables	South Dakotans

Outcome measures for this project (*shown in the table above*) were long term measures, the Behavior Risk Factor Surveillance System (BRFSS) was the planned performance measure source. According to 2013 BRFSS Data, **26.4%** of South Dakota adults report consuming 2 or more fruits per day and **11.6%** report consuming 3 or more vegetables per day. Compared to our benchmark data from the 2011 BRFSS there was a minimal increase in fruit consumption (26.3% in 2011 to 26.4% in 2013) and a notable increase in vegetable consumption (9.4% in 2011 to 11.6% in 2013).

Based on the goals we listed for the project, we fell short of increasing fruit consumption to 28%; however we did meet our goal of increasing vegetable consumption to 11%. Activities from this project cannot take sole benefit in the increased vegetable values. However we believe this project, specifically statewide messaging and fruit and vegetable partnerships from the interventions of this project, was a strong catalyst and contributor to the increased consumption rates.

Data from media interactions, presented in the above table, shows the reach of our fruit and vegetable media messaging. The data for the fruit and vegetable television ad shows a total of 377,300 South Dakota viewers of the ad. For the social media reach and social reach, this data is not specific to South Dakota. Instead this shows reach and social reach, not specific to geographic location, of our fruit and vegetable social media messaging on the YUM! (*Reach: 2,680, 70; Social Reach: 870, 158*) and Munch Code (*Reach: 1,883,785; Social Reach: 418,388*) Facebook pages. This data is strong, as it shows a very large reach in our messaging. Data from the HOM website shows total visits to the website, not specific to South Dakota. The Harvest of the Month website received a total of 26,376 website visits and 20,788 unique visits. This data is very positive, as we are reaching many individuals with our fruit and vegetable messaging and programming.

Data from the Youth Risk Behavior Survey (YRBS) assesses high school aged (grades 9th-12th) individuals and is not necessarily encompassing of the youth and adolescence potentially reached through this project, therefore data from the 2013 YRBS is not presented as a significant data source for our performance measures.

Beneficiaries

As a result of the 2013 Fruit and Vegetable Enhancement of Interventions project, all South Dakotans potentially may have benefited from the intervention. The target audience for this project was all South Dakotans, including all youth, adolescents, adults and older adults. The interventions in this project were primarily done through media outlets (i.e. social media and

television), thus individuals with easy access to these media types may have seen greater benefit from these interventions.

Further, the target audience for Harvest of the Month and Much Code is primarily youth and youth organizations. Thus, South Dakota youth may have also benefited greater from these interventions. As discussed above, data from the YRBS assesses high school aged individuals and is not necessarily encompassing of youth and adolescences reached in this project. As presented in the project approach section above, data shows a large percentage of South Dakotans impacted from the interventions of this project. The data for the fruit and vegetable television ad is specific to South Dakota, showing a total of 377,300 statewide viewers of the fruit and vegetable promotional ad. Data from the Harvest of the Month website shows total visits to the website, which was a total of 26,376 visits and 20,788 unique visits.

Lessons Learned

Over the course of this project, staff in the DOH NPA team was able to enhance current interventions, and further foster and educate on the importance of consuming fruits and vegetables for a healthy lifestyle. With recent data showing South Dakota at the low end of fruit and vegetable consumption, this was especially critical for the work plan of our team. Interventions in this project strongly correlated with activities outlined in our Nutrition and Physical Activity 2010-2015 state plan, for example, Objective 4.6 of the state plan is as follows: *By 2015, reverse the trend and increase the percent of South Dakota adults who consume at least five fruits and vegetables per day to 23%.*

Although we did not meet our goal for fruit consumption rates in South Dakota, we are pleased and encouraged by the increase in vegetable consumption achieved. We feel there were other positive impacts that occurred from the implementation of this project.

As a result of this project it is evident that continued enhancements and promotion of existing fruit and vegetable programs through media messaging will play a part in reversing the trend of poor fruit and vegetable consumption in South Dakota. Social media has a strong presence in South Dakota, making us more successful to reach large percentages of the population with messages to consume more fruit and vegetables and buy them locally. That alone will not be enough, however it is imperative to our efforts to work with and expand partnerships to enhance promotion of fruit and vegetables, specifically locally grown.

With the limited resources devoted to fruit and vegetable programs, partnerships are critical for successful messaging and interventions. We feel with a strong base of partners working together to promote fruit and vegetables and thus bringing more awareness to the topic, we are moving in the right direction.

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Additional Information

- YUM! Facebook Page: <https://www.facebook.com/YUMSD>

- Munch Code (Healthy Concessions) Facebook Page: <https://www.facebook.com/MunchCodeSD>
- South Dakota Harvest of the Month: <http://www.sdharvestofthemonth.org/>

Project 5

Title – YES! (Youth Eating Smart) Pilot Project

Subgrantee: Ground Works

Contact Person – Timothy Olsen

Final Report

Project Summary

Biskeborn cited a 2009 report from the Centers for Disease Control and Prevention that shows that only 19.6 of South Dakota residents consume vegetables three or more times per day.

The research above, whether viewed as a health issue, or a specialty crop economic development opportunity, increased consumption of local grown vegetables and fruits is good for the well-being of South Dakota.

The YES! pilot project will focus on elementary schools, with established teaching gardens, Both schools are located in culturally diverse, under- resourced neighborhoods.

Observations at Lowell MST Elementary “A Growing Place” teaching garden indicate that if students actively engage in the growing and harvesting of vegetables they are more likely to eat fresh vegetables and fruits.

- Establish the motivation for this project by presenting the importance and timeliness of the project.

Using the observations at Lowell Elementary, the YES! pilot project will develop and evaluate a teaching school curriculum that will include the growing, harvesting, and cooking of school teaching garden produce. It will also connect students and teachers/staff with local food producers, Community Supported Agriculture, Farmer’s Markets, and local food cooperatives/networks.

The YES! pilot project will focus specifically on increasing the consumption of locally grown vegetables and fruits.

- If the project built on a previously funded project with the SCBGP or SCBGP-FB describe how this project complimented and enhanced previously completed work.

This project has not been submitted to any other Federal or State grant programs.

Project Approach

US Dept. of Health Fruit and Veggie Eater Meter pre and post test evaluation given to students grades 3-5 at Lennox Elementary and Lowell Elementary. (pre evaluation given by Community Health students from SDSU Nursing Dept. and GW staff)

Numbers at Lennox Elementary were: 45 students and Lowell Elementary were 40 with a total of 85 students surveyed pre and post learning opportunities.

5 Weeks of Summer School lessons taught in conjunction with the school teaching garden at Lowell Elementary in Sioux Falls, SD. This is the only school in Sioux Falls to have

offered a summer school program this past summer. Time was split b/w health and nutrition (eating) lessons, (taught by GW staff) and math and science in the garden (taught by school teaching garden manager). Interesting to note: During both pre and post test (which is included as an attachment) an additional question was asked: “If you had the chance would you eat fresh fruit and vegetables more often?” In both instances 100% of the students answered that they would do so. This is regardless of whether or not a summer school opportunity was present.

This began as an advisory role and brainstorming think tank group. Multiple ideas from all venues from Chefs to local food growers came with wonderful ideas for lessons to be taught. SDSU Nursing Students were excited to use the Eater Meter as an evaluative tool. Local growers and CSA managers were present in the lessons with the students. Avera and Sanford chefs lent their talent and expertise in planning the “Top Chef Challenge” at the Harvest Festival held in Sept at Lowell Elementary where over 750 children and families were present.

Team members (Project Partners) include: Natural Foods Co-op, Avera Health Systems (Culinary) Sanford Health Systems (Culinary), Lowell Elementary, Lennox Elementary, Ground Works, The Good Earth CSA, Live Well Sioux Falls, SDSU Nursing.

Goals and Outcomes Achieved

Completion and distribution of a “tested” YES! curriculum for school teaching gardens	Students, teachers, instructional coaches, SDSU Staff and community leaders will evaluate curriculum effectiveness
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Activities: **Green Bean 5 Senses Investigation.**

Included comparisons of canned, frozen, and from the garden green beans. Students took home bags of both green and purple green beans. “What happens to the water when you boil the purple beans?” Science I wonder If question.

Zuchinni or Cucumber (fruit or vegetable classification)

“Did you know you can make chocolate cake out of zucchini?”

Recipes and guest speaker from Natural Foods Co-op helped lead the discussion, students demonstrated working knowledge of garden bed growth. Zucchini and recipe given to each student to take home.

Tomatoes—

“Did you know all the ingredients for salsa grow....right here?”

Using tomatoes as a theme, students practice their math, language arts and science skills of estimating, measuring, counting, graphing, listening, speaking and sequencing. Children will gain familiarity with different types of tomatoes and explore how they taste. Children learn that many vegetables come in lots of different varieties that all look and taste different.

Lettuce Comparisons

Students picked, tasted, compared, and evaluated the different types of salad greens growing in the garden beds. Students were sent home with bags of lettuce greens

Veggie Recap/Healthy Choices WHAT DID WE LEARN?

“Would you eat more fresh fruit and vegetables if you could” Yes, unanimous.

- If outcome measures were long term, summarize the progress that has been

made towards achievement.

This allowed us baseline data and a jumping off point for the use of curriculum, program partners, pre and post test evaluations, and teaching materials. This is one part of the program which is now under additional revisions and writing.

Goals included developing curriculum and lessons to be taught in the gardens bringing awareness, education, and contact with fresh fruits and vegetables with the students served in the summer school programs. This was done. Lessons were taught, pre and post test evaluations given and data collected. Students took home produce from the gardens at each session and were given recipes they could use at home. These goals were met, but point to increasing the exposure and length of the program offered.

Please note the following stats in relation to the consumption of fruits and vegetables:

How many times did you eat Fruit or Vegetables yesterday?

5th Grade

Fruits= 1.06 (total 5th Graders surveyed)

Vegetables= 1.11 (total 5th Graders surveyed)

3rd Grade

Fruits= 1.54 (total 3rd Graders surveyed)

Vegetables=.752 (total 3rd Graders surveyed)

These are PRE summer school numbers. Example: of the 18 5th graders surveyed the average consumption of fruits on a day basis was : 1.06

Lennox Elementary PRE summer school numbers:

3rd Grade

Fruits= 1.11 (total 3rd Graders surveyed)

Vegetables= 1.15 (total 3rd Graders surveyed)

5th Grade

Fruits= 1.6 (total 5th Graders surveyed)

Vegetables= 1.4 (total 5th Graders surveyed)

-

After 5 weeks of Summer school at Lowell Elementary the numbers revealed: (same survey, same questions administered in same fashion)

Lowell Elementary 3rd & 5th Grade WITH Summer School

3rd Grade

Fruits= 1.8

5th Grade

Fruits= 2.07

Vegetables= 1.5

Vegetables= 1.87

Lennox Elementary had a garden in its first year having planted only weeks before and no summer school opportunity. The same survey was given to the students in the same fashion in the same timeframe as the survey at Lowell Elementary.

Lennox Elementary 3rd & 5th Grade WITHOUT Summer School

3rd Grade

Fruits= .94

Vegetables= .778

5th Grade

Fruits= 1.11

Vegetables= .879

If we look at the numbers above it clearly shows us that with instruction, education, exposure, and access the consumption of fruits and vegetables increased with each grade. While Lennox started out a bit better in consumption prior to summer school, there was no established program there. Each of those numbers fell. Example: Consumption of vegetables in 5th grade PRE test was 1.4. After 5 weeks with no instruction, the same question gives us vegetable consumption at .879 This is a significant decrease and with numbers in 2009 showing that SD consumption of fruits and vegetables is near the bottom of nation average, these are decreases our youth cannot afford.

Beneficiaries

Anecdotal: Harvest Festival Planning (this included the Top Chef Challenge with 5 local Chefs from: Avera, Sanford, Breadico, Casa del Rey, and Trail Ridge Retirement Home) This was collaborative effort with the lead chef from Avera. Promotional work was done on radio and television up to and the day of the event. Challenge included taste testing, judging with complete evaluation tool, and the crowning of the winner. Winner was announced at the event on Saturday Sept. 20, 2014. Chef Mike DeLay from Trail Ridge was the winner. He was excited because he was a Lowell Elementary student and it meant the world to him to be able to teach children and families about what was grown in the garden. "This garden was not here when I was a kid. Now, I can teach my daughter about healthy eating." His daughter is severely developmentally delayed with autism spectrum disorder.

All Chefs used produce and herbs from the local teaching gardens, the Teaching Garden Demonstration and Training Center at the Mary Jo Wegner Arboretum (east of Sioux Falls) and a local garden: "Mary's Kitchen" from Beresford, SD. All those participating agreed to return the following year, with more chefs signing on for the 2nd annual Top Chef Challenge to be held Saturday Sept. 19, 2015 at Lowell Elementary in Sioux Falls, SD.

Percentage who report consuming fruits and vegetables less than one time daily

Median intake of fruits and vegetables (times per day) **South Dakota CDC numbers 2013**

Report: <http://www.sdstate.edu/hns/annual-conference/upload/skjonsberg-handout.pdf>

Fruits: 41.2

Vegetables: 38.8

1.0

1.1

National Average:

Fruits: 36.0

Vegetables: 37.7

Goals for YES! and other programs working on the consumption issues point to a couple of key indicators:

The national Healthy People 2010 fruit objective and vegetable objective are to:

- Increase the proportion of Americans aged at least 2 years to consume- daily 2 or more servings of fruit to 75% and- 3 or more servings of vegetables to 50%, respectively

According to the most recent report South Dakota State Nutrition, Physical Activity, and Obesity Profile 2012 : <http://www.cdc.gov/obesity/stateprograms/fundedstates/pdf/South-Dakota-State-Profile.pdf>

Fruit consumption: 74.0% ate fruits or drank 100% fruit juice less than 2 times per day during the 7 days before the survey (100% fruit juice or fruit).

- Vegetable consumption: 88.7% ate vegetables less than 3 times per day during the 7 days before the survey (green salad; potatoes, excluding French fries, fried potatoes, or potato chips; carrots; or other vegetables).
Studies suggest that behavior-based interventions generally result in a statistically significant increase in fruit and vegetable consumption.

Lessons Learned

When originally presented the anticipation was that 2 schools in Sioux Falls would act as the test pilot. These included Lowell elementary and Hayward Elementary. Plans were actively underway when GW discovered that Hayward Elementary would not offer a summer school program due to construction at their school.

Revamping of plans ensued with a focus change to compare 2 schools within the GW network: Lowell Elementary and Lennox Elementary in Lennox, SD. This represented the largest and most diverse school in Sioux Falls and the first rural school within the GW network.

Lowell Elementary had an established Summer school program associated with the garden for the past 6 years.

Lennox had no summer school and had newly planted their garden May 2014.

Project Partners excitement ran high—this was advantageous. The disadvantage was the time expended. Many found with weather and flooding their attention turned to their own gardens, programs, or places of business.

SDSU Nursing Students were available for 2 weeks and tried to squeeze in evaluation in the midst of an already busy summer schedule—this left no time for effective post evaluation discussion...the instructor also took a job on the east coast leaving the state and the group mid summer.

Weather and flooding of the school teaching gardens made harvesting more difficult. Many of the gardens were planted in mid-May on some of the coldest days of the spring.

Lennox, newly constructed, did not have a summer school program nor did they have a set down plan of what to plant, where, and how to incorporate within the summer months.

According to the most recent statistics, the rates of childhood obesity and diabetes are on the rise, with no end in sight. We also factor in the mental health aspects of our students with many more children being placed on medications, this is an opportune time for more education and application of the importance of fruit and vegetable increased consumption. Yes, the goal of 75% of GW network schools using YES! curriculum is feasible and necessary.

With more research done with Richard Louv and the Nature Deficit, it is clear that there is no one in the GW region (South Dakota, Southeast Minnesota, or Northwest Iowa) implementing programs and lessons tied to a teaching garden, much less linked to a summer school program option. GW has the cornerstone in this new territory. Now, more than ever, the need for positive and preventative response is urgent. GW can meet that need.

More realistic will be a re-vamping of numbers of students impacted. Due to the strict constraints on schools in terms of Common Core and STEM education, there is little time in their schedules for additional lessons. GW is hard at work creating teacher-designed learning kits to meet this need. Many of the schools within the Sioux Falls School District must adhere to strict guidelines of what can be taught, what grants can be applied for, and how funds can be used. This makes large blanket numbers more difficult to attain.

GW has learned that no school in Sioux Falls has the budget to present any kind of summer school program this coming summer 2015. GW is ready with lessons, activities, and collaborators to create a turnkey summer school program for the schools within the GW network.

Phase 2 of YES! includes summer school lessons in a 1 week format for 3 hours a day at the 4 GW network schools. A plan and proposal are in production at this time to be presented to each school administrator. A strong coalition of healthcare, education, and nutrition-oriented people are gathering to work on this project set to be taught and implemented the summer of 2015.

With the assistance of a newly-formed YES! team, create summer school lessons for a 2 week period (Mon-Fri) for 2 hours a day at each GW network site, including evaluative tool, education rubric, and activities using health, wellness, and cooking as key elements.

Receive individual school approval to implement summer school option at each teaching garden within the GW network.

Work out transportation and registration particulars for each summer school location

Attend all meetings with Sioux Falls based Food Council headed by Live Well Sioux Falls. (This would target the Hayward School District in the northwestern part of Sioux Falls which houses a GW school teaching garden. Recent meetings with Avera, McKennan Foundation, Live Well Sioux Falls, Sanford, American Red Cross, Hayward Elementary, Sioux Falls Parks and Rec, Feeding South Dakota, and Ground Works are looking at nutrition and program assistance in this area as we speak. More information will be available early 2015 as to the direction of this group.

Prelim tests and lessons show us that there is a need. The current SD trend of fruit and vegetable consumption continuing to decrease ,shows there is a need for more education and programs, which enhance learning through a teaching garden. GW was able to collect baseline data which supports this data. GW was able to provide data which indicates that education and exposure to fruits and vegetables through a school teaching garden increases the consumption of fruits and vegetables.

We are left with many opportunities for growth and exploration with continued work with partners, educators, children and parents.

What happens at home with produce?

Are recipes used at home?

What are specific reasons for low consumption rates? We know some environmental and economic factors impact this. What are solutions for these rates?

These are just a few of the questions and issues we hope to tackle and work toward a viable solution. With the continued help of our program partners, including, USDA SD Dept. of Ag., we can make significant strides to build upon already existing momentum. GW is also in conversation with 3 middle schools and 1 additional elementary school at this time, bringing the number of schools within the GW network to 8 with more than 5,000 students attending. Last year, GW served 1956 students through the established teaching gardens within the GW network. This indicates the desire to work with a school teaching garden increasing significantly.

Contact Person

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Additional Information

www.groundworks-midwest.com

Project 6

Title – Growing Local Production Seminar

Subgrantee: South Dakota Specialty Producers Association

Contact Person – Pat Garrity

Final Report

Project Summary

Multiple organizations across the state are committed to helping growers gain information and resources to improve specialty crop quality, consumer safety and to increase the number of farmers markets in our rural communities. A majority of this information is currently provided on an individual basis through direct contact with the resource or as part of localized specialty crop/local foods meetings. These are obviously effective avenues but can lack a comprehensive scope and access to expertise.

Discovery meetings held across the state during winter 2010 and spring of 2011 found growers yearning for production training, business training and expanded markets for their product. Partnering organizations are also exploring the potential to regionalize aggregation of production, processing, packaging, marketing and distribution using the cooperative model as part of South Dakota's local food systems. Still other entities are working with growers, various garden types, processing and diverse marketing avenues. Strategy to increase awareness and bring small, medium and large growers and buyers together is essential to building a comprehensive food system initiative.

How is this project important and timely?

Local food systems create more area based, self-reliant food economies yet an estimated 97% of the food consumed in the Midwest is imported with a majority of it traveling about 1500 miles to reach our table. Gross food expenditures range from \$433 million in Sioux Falls to \$315 million in Rapid City to \$74 million in Huron. Local foods can take a portion of that food dollar allowing enhanced economies for our rural communities from the turnover of dollars from production to sales of specialty foods. Consumer food purchasing decisions are mainly influenced by price/convenience/flavor/health-safety. With calculated planning and strategic implementation of goals, local foods can satisfy these consumer desires.

SDSPA formed in 2002 as an organized effort to help producers tap into this emerging market opportunity and the member base represents a wide range of specialty crops and products across the state. The association's main focus has been obtaining funds to hold specialty crop producer workshops and marketing projects, including producer inventories and "Buy Fresh Buy Local" South Dakota chapter sponsorship. SDSPA is dedicated to providing the highest levels of grower education and support to promote consumer safety and market expansion for their specialty crop products. Holding a statewide Growing Local seminar in Huron during Value-Added Day at the South Dakota State Fair offers a platform to attract regional growers and resources which can result in diversified views helpful in building our statewide local food system.

- An essential step to establishing an annual event that can effectively grow to help address challenges as South Dakota's local foods programs advance.
- Effectively serve needs of growers, food processors, and buyers by creating collaborative efforts to develop and share resources including information, infrastructure, funding.
- Foster grower relations from various regions to address foodshed development.
- Provide a platform for public and youth awareness of local food offerings.
- Industry associations could also hold meetings/trainings in conjunction with the SDSPA seminar as many are present at the State Fair.

Hosting a training seminar expands opportunity to identify resources and gain knowledge from industry leaders. And a statewide seminar will build new or expand existing education programs,

training and production initiatives aimed at improving specialty food production, business planning and marketing. Possible topic areas include:

- Production – crop selection and management, high tunnels, GAP, 3rd party verification
- Operating – business planning, bank financing, insurance, combining production-processing resources
- Market – branding-promotion, analysis, connections, pricing, volume sales, distribution
- Processing – SD regulations, commercial kitchens
- Buyers – identifying quality produce, grower criteria-pricing education, distribution

Project Approach

Preliminary meetings were held with SD Specialty Producer Association executive committee in April, June and July to determine topics for the seminar. The intent was to provide topics to increase production skills. The committee selected the topics and Patrick Garrity made the arrangements for the presenters.

Promotion was provided by SD Value-Added Development Center in state-wide PSA announcements throughout South Dakota. The promotion efforts began early August for the August 28 event.

South Dakota Specialty Producers Association also provided an informational booth to promote specialty crops and production information at the seminar.

The following agenda was submitted to various website connections and other social media. The SD State Fair also published the agenda on the fair program. The agenda was also submitted to agricultural radio stations.

South Dakota State Fair

Value Added Agriculture Development Center / South Dakota Specialty Crop Association Specialty Crop Production Seminar

9:00 AM

Registration, social mixer

10:00 AM

The foundation of successful production

GrowRite / SoilWorks

Presentation to gain insight and techniques to improve production and quality with a focus on soil.

11:00 AM

Agriculture Drainage – Can this production tool help your operation?

Tile drainage 101 – general background information to assist your operation to evaluate the cost/benefit of agriculture drainage.

12:00 PM

Lunch on your own. Great time to check out the fair food and exhibits.

1:00 PM

Specialty Crop Weed Management

South Dakota State University

Presentation of abrasive weed control methods currently under experimentation at SDSU.

2:00 PM

Production tools and implements for specialty crops

Area producers and implement dealers provide insight to the various tools available for specialty crop production.

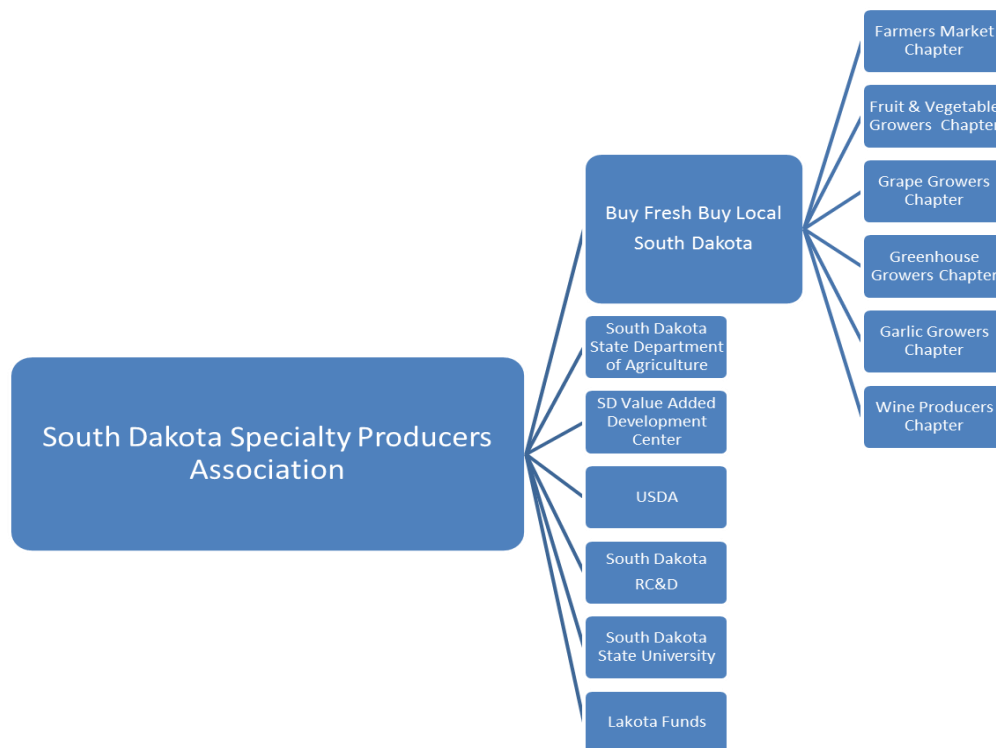
3:00 PM

Round table discussion

Input from growers regarding crop production, marketing or other topics to assist with successful production.

Goals and Outcomes Achieved

Goal	Performance Measure	Benchmark	Target	Actual
Invite growers to conference	Number of grower participants	0	15	10
Invite resources to conference	Number of resource exhibits	0	20	18
Provide message to consumers at conference	Number of consumers reached	0	30	35



South Dakota Specialty Producers Association

- SDSPA a c3 nonprofit status
- BFBL SD will be a marketing unit providing materials, assistance, grant writing and other support to enhance marketing efforts
- Each individual organization can benefit from SDSPA c3 status in regards to funding, grant application, partnerships, educational programs, field tours, various educational facility relationships (SDSU, BHSU, Area Votec, etc.)
- Service providers offer technical assistance, production assistance, research, grant funding resources, marketing assistance, business research / analysis, feasibility plans, education / training programs, specialty crop funding and food safety seminars.

Organizational ideas:

1. SDSPA is umbrella organization to provide c3 nonprofit benefits for all grower groups. It can also provide greater impact with larger membership numbers. Another benefit is the ability to combine groups into compatible interests and provide quality programming and educational seminars.
2. Chairperson for individual organizations serve on the SDSPA board. Paid executive director also provides service to BFBL requirements, grant applications, etc.
3. SDSPA board of five executive members and paid Secretary / Treasurer. The board provides oversight for each of the growers association and services from BFBL.

Grower Participation:

1. Currently have 37 members of SDSPA and officers are finalizing the organizational chart. The discussion is setting dues structure, establishing the c3 status and providing appropriate benefits for each chapter.
2. The SDSPA officers' goal is to have the organizational structure in place with each chapter functioning in 2015.

Beneficiaries

The participants consisted of specialty crop producers with ten years or greater of production experience to beginning producers with no actual experience. The seminar did provide the setting to allow conversation between these producers and the ability to make connections in the future. A conversation became somewhat animated when proponents of proper soil management questioned the methodology of weed management. It resulted in an interesting discussion about why weeds are a problem and simple weed control is just a reaction to a more fundamental problem of poor soil management. The moderator maintained proper meeting decorum but the conversation resulted in an agreement to disagree.

SDSPA survey of the participants after the seminar provided the following:

- a) Please rate the South Dakota Local Foods Seminar(1 Excellent)
1 (2 growers) – 2 (3 growers) – 3 (5 growers) – 4 (0 growers)
- b) Please circle the most beneficial topics from the seminar
Soil Management (4 growers)
Agriculture Drainage (2 growers)
Weed Management (3 growers)
Production Tools (1 grower)
- c) Did the seminar provide partnership opportunities
Yes (2 growers)
No (8 growers)
- d) Please circle your future intentions to participate in the South Dakota distribution partnership
Yes (4 growers)
No (3 growers)
Maybe (3 growers)

Lessons Learned

The seminar was intended to provide a statewide meeting place for specialty crop producers. The state fair should be a natural location to provide educational programs as it lends itself to other activities to make a worthwhile effort to attend. The theory seems logical but the results are discouraging. The producers do not relate to the state fair and education. It seems to be an

oxymoron...the state fair is for entertainment, not education. The lesson here is to provide education in other environments.

The budget for this project was not all expended and we suggest extending the finances to provide an educational seminar at a location conducive to learning. Some past success leads to centrally located community centers or education centers. The producers state they want continuing education but obviously the location is an important consideration.

Contact Person

- Patrick Garrity - President SD Specialty Crop Association
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Additional Information

N/A

Project 7

Title – Buy Fresh Buy Local South Dakota

Subgrantee: South Dakota Speciality Producers Association

Contact Person – Pat Garrity

Final Report

Project Summary

Buy Fresh Buy Local South Dakota provides technical, promotion and organizing skills to establish Farmers Markets in rural and reservation communities in South Dakota.

Project Approach

Buy Fresh Buy Local SD (BFBLSD) assisted Wagner, White River, Kyle, Eagle Butte, Mission and Murdo farmers market specialty crop producers. The communities of Wagner and Murdo have received promotional materials to promote the market site and market days. The communities of Kyle and Eagle Butte received their promotional materials in 2014. Assistance is also provided to Mission and White River to develop farmer's market specialty crop producers. The farmers markets are utilizing marketing materials to promote the specialty crop producers. The promotion concept is to identify farmer's market location with signage stating the market days, hours and location to allow customers to identify market details on a continuous basis. The survey will be used as baseline to evaluate the effectiveness of market site promotion. The next few years of data will allow a review farmers market activity to develop a promotion program for specialty crop producers.

Goals and Outcomes Achieved

A survey at the conclusion of the 2014 specialty crop farmers market season to measure market participation:

Farmers Market Name	Number of markets / season	Number of specialty crop vendors / season	Number market customers / season	Gross specialty crop market sales / season
Murdo Farmers Market	8	7	216	\$1,950.00
Eagle Butte Farmers Market	6	6	96	\$850.00
Wagner Farmers Market	10	12	350	\$3,000.00
Kyle Farmers Market	8	4	192	\$1,525.00

- What is the percentage increase of access to fresh fruits and vegetables in rural and reservation communities? (Expected Measurable Outcome)

2013	\$5,800.00	Baseline / Total	Baseline Yr /Yr
2014	\$7,325.00	27%	27%
2015	\$9,875.00	71%	35%

Buy Fresh Buy Local SD partnership with Dakota Rural Action provides financial assistance for the SD Local Foods Guide. The guide is an excellent publication with statewide coverage of all local specialty crop producers. The guide is a requirement for BFBLSD organization, but a decision was reached not to duplicate services and cooperate with the existing publication. Please see the link [SD Local Specialty Crops guide](#) for details and view the food guide.

Buy Fresh Buy Local SD also maintained and financed the BFBLSD.org website to provide timely information and updates regarding specialty crops in South Dakota.

Beneficiaries

The main beneficiary is the specialty crop producer. The citizens of the rural or reservation community also benefit by efforts to increase consumption of local foods throughout South Dakota. Each market needs dependable supply, reasonable profit, constant quality and good promotion, all goals of the *Buy Fresh Buy Local SD*.

Lessons Learned

The strongest barrier regarding farmers markets in very rural areas is developing relationships with the community leadership. Technology is not readily available in many of the communities and that requires onsite visits / long time frame correspondence to provide the assistances as required by the grant goal: Increase technical, promotion and organizing skills for specialty crops at rural and reservation community farmers markets in South Dakota.

Any Additional Information

BFBLSD will continue to provide assistance to the communities currently using the promotional materials and concentrate on start up efforts for Mission and White River.

The current survey will be used as baseline to evaluate the effectiveness of market site promotion. The next few years of data will provide a review of farmers market activity to develop a promotion program for specialty crop producers. The data will become more valid after a few years of collection and as we add the additional farmers markets.

Project 8

Title – Increasing Food Distribution with Winter Storage of Specialty Crops

Subgrantee: Cedar Creek Gardens, LLC

Contact Person – Peggy Martin

Final Report

Project Summary

Many rural communities have limited access to healthy food choices. This is especially true in the winter months. What is desperately needed is having a place to store quantities of food for winter food distribution.

Root cellars are an ideal way to store food, keeping it from freezing in the winter months, and keeping it cool during the summer months to prevent spoilage. The ground surrounding root cellars provides a natural geothermal barrier which keeps food supplies at a safe temperature and steady humidity. Many homesteads have cisterns that are no longer being used. Changes in grain storage requirements have left many smaller grain bins abandoned. Recycling these items will demonstrate economical ways to extended post-harvest storage.

Project Approach

Cistern Conversion

We achieved the goal of "demonstrating the ability to renovate existing structures for food storage utilizing natural geothermal benefits. An existing, unused cistern has been retrofitted and is being used as a root cellar. The natural geothermal benefits are as good or better than we had anticipated. In monitoring the temperatures in the storage area, we were pleased to discover that on the hottest days of August the root cellar did not get over 60 degrees. Now, during winter, we have had sub-zero outside temps and the root cellar stays at 50 degrees. Onions and carrots were just as good in March as the day they were put into the cellar at the end of September.

A minor change to the planned activity was made. A wood entry way was made instead of a cement block one. The reason was ease and cost of construction on wood vs blocks.

Grain Bin Conversion

The grain bin was moved and installed into the ground. All was going great until when the area around the grain bin was being back filled a part of the bank caved off. When the bank caved off it dented the side of the grain bin. The roof started to collapse in. We went in and tried to put in more supports for the roof but the side continued to collapse, but by early December the door would no longer open or close and use was discontinued. We moved all vegetables to a walk-in cooler to continue our winter veggie boxes and wholesale account orders.

We would suggest if someone wanted to try to convert a grain bin they put adequate roof support in and make sure when back filling hole to go slowly and cautiously. Another option would be to leave the cone part of the grain bin out and have spray on foam insulation added to that part.

Goals and Outcomes Achieved

A tour of the cistern was done in June a local garden tour. Several commented on how easy the project would be to do.

The Grain Bin did not have a public tour although several locals stopped by to see it. We do know of one another root cellar that was installed because of this project. He recycled chunks of cement cut from the Interstate. He got them from a contractor that was working on I90. We did establishing a winter CSA called sdveggieboxes.com. We are able to run until about March with the vegetables we put in winter storage. We also supply our wholesale accounts with vegetables from the storage. The main vegetables we have for that long are parsnips, potatoes, onions, and carrots. We did run test to see what method works best for storage. Half of the carrots were stored washed and half unwashed. We found that washed carrots were more than twice as likely as unwashed carrots to show signs of rot, so we used those up first.

Lessons Learned

Both of these projects were a success even though the grain bin had to be demolished. The reason is that although the grain bin wasn't used a different solution was found and quality winter vegetables were made available to the public.

Contact Person

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Additional Information

- More information about the project can be found at <http://rootcellarproject.com/>

Project 9

Project Title: ARCHIVING HISTORICAL DEVELOPMENTS TO CREATE AN IDENTITY AND CULTURE FOR VITICULTURE IN SOUTH DAKOTA

Final Performance Report

Project Title: ARCHIVING HISTORICAL DEVELOPMENTS TO CREATE AN IDENTITY AND CULTURE FOR VITICULTURE IN SOUTH DAKOTA

Project Summary

- Provide a background for the initial purpose of the project, which includes the specific issue, problem, or need that was addressed by this project.

- South Dakota climate has a remarkable impact on fruit plant breeding for harsh northern climates. Temperatures to 40 below F and intermittent dormancy breaks challenge what early settlers knew about fruit propagation and survival. Dr Petersen continued the work of Dr Neils Hanson of SDSU. Dr Petersen collected samples of vitas riparia (wild grapes) He traveled the riparian areas of the Missouri River and its tributaries to collect phenotypically appropriate samples. This work helped foster the development of various hybrid grapes including the one that he is credited with, Valiant, Others in the region continue to breed hybrid cultivars that define wines in several northern tier states.
- Establish the motivation for this project by presenting the importance and timeliness of the project.
 - Dr Petersen is well on in years. His memories and story-telling abilities are still acute, but the relentless procession of time made it imperative that this capture activity take place as soon as possible.
- The activity for this project included:
 - Planning and advance communications with Dr Petersen and the cooperators.
 - Coordinating the video capture resources and venue and traveling to Dr Petersen's home town.
 - Capturing the video of Dr Petersen's professional activities, South Dakota State University Vineyards, research activity in genomics led by Dr Anne Fennel, and near harvest vineyard footage of Valiant grapes.
 - Edit and re-edit of all the footage including a short introductory trailer for the entire footage.
 - Distribution to intended recipients and display of the video at various activities.

Project Approach

- Briefly summarize activities performed and tasks performed during the grant period. Whenever possible, describe the work accomplished in both quantitative and qualitative terms. Include the significant results, accomplishments, conclusions and recommendations. Include favorable or unusual developments.
 - The initial phase that including making video archives of the work of Dr Petersen is complete. Nearly 2 hours of HD video interview with Dr Petersen, Dr Anne Fennel and Bob Weyrich is archived. Additional footage of the SDSU vineyard during the winter is captured. A western SD vineyard, owned by Kris Booze, is also included in footage captured near harvest time in the fall of 2014.
- Present the significant contributions and role of project partners in the project
 - From the genesis of this project, a conversation between Dr Fennel and Robert, hours of time were spent to discuss, plan, 12 hrs of travel and an overnight stay ahead of producing the interview. The video capture staff made a significant contribution beyond just the mechanics of the video capture also including the same 12 hrs of travel, post capture editing and production. This

well exceeded the contractual remuneration for the crew. Dr Petersen committed the best part of a day to conduct the interview and trudge deep crusted snow on a cold winter day. Dr Burrows and Ms Kris Booze, vineyard owner, also made contributions that still added additional depth to the project outcome.

Goals and Outcomes Achieved

- Supply the activities that were completed in order to achieve the performance goals and measurable outcomes for the project.
 - Work concluded in August 2015 to include the editing of a tremendous amount of raw footage—over 200 GB of data. The final version of the archive includes an introductory trailer with subtitles set to music and captures Dr Petersen’s warm and jovial personality. The rest of the video in DVD format includes the entire interview with Dr. Petersen conducted by Robert Weyrich and Dr Anne Fennel. Copies of the DVD were burned and included two still photographs on the DVD.
 -
- Clearly convey completion of achieving outcomes by illustrating baseline data that has been gathered to date and showing the progress toward achieving set targets.
 - As illustrated, the video made premier public showing at the 2015 SD State Fair in September. The showing occurred at the SD “Ask for It” Wine Pavillion. At least 3000 people had the opportunity to view its entirety or catch segments of it as they enjoyed their wine. The Valiant grapes that Dr Petersen developed are planted directly outside of this building. The vines planted nearly 8 years ago bear fruit for the public to enjoy.
 - 100% of the viewers questioned responded that they had a better understanding of the work and the approach that Dr Peterson’s research and grape breeding activities.
- All partners have cooperated to get the activities planned and completed to this stage. Dr’s Fennel and Burrows will have the opportunity to share this with those they see fit. There is expectation that the video can be shared in the classroom or with colleagues expressing interest in the work. Ms McCausland, Director of the SD Agricultural Heritage Museum will add to the archives of the museum and catalog accordingly. The expectation will be that this archive will be available for public viewing by interested parties.
- Have you made progress towards achieving your set targets?
 - While progress of late has been delayed, final editing should be completed in the near future
 - Editing took longer than expected and was not completed until August 2015

Beneficiaries

- Provide a description of the groups and other operations that benefited from the completion of this project's accomplishments.
 - Copies of the video were distributed to the following:
 - SD Secretary of Agriculture, Mr Lucas Lentsch;
 - SDSU Dean of Ag and BioSciences Mr Barry Dunn;
 - SDSU Professor, Dr Anne Fennel;
 - SDSU Professor, Dr Rhoda Burrows;
 - SDSU Agriculture Heritage Museum Director, Gwen McCausland.
 - Remaining copies have been retained by Weyrich to distribute as needed to inquiring parties.
 - A hard drive with all the data will be retained by Weyrich for archival and reproduction purposes as well.
- As this is an archival project, it is expected to be viewed for some time by any one making the request including the general population, students, academic leadership and industry partners.

Lessons Learned

- Offer insights into the lessons learned by the project staff as a result of completing this project. This section is meant to illustrate the positive and negative results and conclusions for the project.
 - The academic world can rely upon these archives to inspire and direct their own efforts to for projects in the world of plant breeding or any disciplines.
 - The growers of these grapes and fruit trees, from hobbyists to commercial vineyards can know a little more about the origin of the genetic materials.
 - People who produce and consume wines of the region have the opportunity to view the commitment and passion that brings the products to fruition.
- If goals or outcome measures were not achieved, identify and share the lessons learned to help others expedite problem-solving.
 - The project was completed as expected, albeit slightly behind the proposed timeline. The archives were captured and initial distribution was completed. Additional distribution to inquiring parties can occur as planned in the funds request.

Contact Person

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Respectfully submitted by Robert Weyrich. 2/27/2017

Project 10

Title – 2014 Farmers Market Grower Grant

Subgrantee: South Dakota Department of Agriculture

Contact Person – Jodi Bechard

Final Report

Project Summary

Farmer's Markets are an important outlet for specialty crop producers to market their products. They also foster interaction between producers and consumers. There are many new specialty crop producers selling their products at farmers markets. Many of them have questions on pricing their fruits and vegetables. Right now, the information collected from this project is the only information available from a cross section of farmers markets across the state.

In 2012, we collected baseline data about the price vendors were charging for specialty crops, and the amount of sales vendors were making at the farmers market. The 2012 data now serves as the baseline data for all future collections moving forward. The data collected in 2013 has been compared to the 2012 data. This information is helpful for potential specialty crop producers or beginning producers as they start pricing their product for sale.

Project Approach

SDDA used our network of farmers markets and provided information to all of them about this program in February 2013. We used direct email contact as well as utilizing a South Dakota Farmers Market Listserve to inform potential applicants about the program. Information and the application were also available on our website. Applications were due March 29.

We originally approved 13 applications and then throughout the course of the growing season, 1 market was unable to open. All successful farmers markets were notified of funding in late April and individual calls were held with all farmers markets to review the program requirements. In addition, reminder emails were made to the farmers market managers about a week prior to the information collection dates.

Qualifying farmers markets will be eligible for \$1,000 grant. Fifty percent of the funds were made available upon signing a grant agreement and fifty percent of funds were made available when all information was successfully submitted.

Farmers market managers submitted three pieces of information to SDDA over the course of the growing season.

1. Markets were required to record and submit lists of specialty crop products sold and their respective sale prices at three different times throughout the season (early, mid and late

season) to SDDA. SDDA provided a template for farmers markets' use. Pricing information was collected by all markets:

- The last market in June
 - The first market in August
 - The third market in September
2. Farmers markets also submitted gross sales data from their vendors at three different times throughout the season (early, mid and late season) to SDDA. Vendors submitted the data anonymously by writing their gross sales figures on a slip of paper and putting it in a sealed envelope given to the farmers market manager.
 3. Farmers markets collected customer information through a dot survey once during the market season. Information collected included the following information: miles traveled to market, customer age and gender, and customer dollars spent at the market.

SDDA worked closely with the farmers markets during the growing season. We sent them a template for reporting pricing and gross sales. We also provided a brief overview on how to use the dot surveys. We sent them email reminders and/or follow up phone calls to remind them to collect this information and submit it to SDDA.

SDDA presented the results of this information at the 2013 South Dakota Local Foods Conference to approximately 40 attendees. 80% of them indicated this information was useful to them. We also presented this information to 23 attendees at a Farmers Market Workshop in February 2014 and to 31 attendees at a regional economic development meeting in March 2013. We've had several requests for more specific pricing information from specialty crop growers after these meetings.

Goals and Outcomes Achieved

Goal	Target	Actual Results
Increase information available about pricing for fruits and vegetables	90% of people who receive the information will find it useful	85% of people at the 2013 SD Local Foods Conference indicated this information was useful to them

While we fell just short of our target goal of 90% of people finding the information useful, we are pleased to know that 85% of the people who received the information found it useful. We've also had several requests for more specific information than what we are able to provide during a short presentation.

Beneficiaries

Specialty crop producers will benefit from this project by being able to identify a pricing scheme for their product based on their geographic location in South Dakota. We have also identified that late in the farmers market season, customers attendance dwindles. This gives the farmers markets an opportunity to continue to promote the market to customers and remind them that locally grown fruits and vegetables can still be purchased in September and October. This information can also be useful to specialty crop producers because it helps them identify additional marketing periods for their products or identify additional crops that they can add to their farm to increase their growing season and their sales opportunities.

The information obtained from this project will be used as a baseline going forward so we can start to look for trends in the information collected. It also helps make the case of how specialty crop production is becoming more and more important to our state's economy. Even though it is dwarfed by traditional crop production, it is starting to make an impact on our economy and to our specialty crop producers.

Lessons Learned

Going forward, we have learned some lessons and will be conducting the application process a bit different in coming years. In 2012, we approved applications on a first come-first served basis, but this may not be the best choice. Because of the selection process, we lacked diversity in the size of the markets. In 2013, we included a wider array of market sizes in the selection process. We also want to continue to make sure that we have geographic variety in the markets – that the markets involved in this program are spread out across the state and aren't all concentrated in one area of the state.

It has, at time, been a challenging project. Because almost all of the farmers market managers are volunteers and many of them are also vendors at the farmers market, information isn't always collected exactly as we'd requested. There have also been times, when a certain piece of information wasn't able to be collected because the farmers market manager was ill or out of town and other volunteers weren't able to collect the information (despite the manager asking them to).

When we presented at the farmers market conference, we also received some valuable feedback from growers about how to collect the information (such as cost per pound or cost per each item).

Additional Information

Procedures for Conducting Dot Surveys

1. Read the 'Tools for Rapid Market Assessment' from Oregon State University Extension Service (<http://extension.oregonstate.edu/catalog/pdf/sr/sr1088-e.pdf>)
2. Choose a market day in mid-season to conduct the survey
3. Purchase supplies
4. Write the questions and answers (provided below) on 4 separate easels or posters
5. Have a volunteer(s) direct customers towards the survey at the market
6. Tally up the answers and mail or email your raw data to SDDA. You do not need to make charts or graphs. Send us only the number of dots on each answer to each question.

Questions to ask on your dot survey

1. How many miles did you travel to attend the market today?
 - a. Less than 1 mile
 - b. 1 – 5 miles
 - c. 5 – 10 miles
 - d. More than 10 miles
2. How often do you shop at the farmers market
 - a. Every week
 - b. 2-3 times/month
 - c. Once a month

- d. Infrequently
 - e. First Time
3. How much have you (or will you) spend at the market today?
- a. Less than \$10
 - b. \$10 - \$15
 - c. \$16 - \$20
 - d. \$21 - \$25
 - e. More than \$25
4. What did you (or will you) purchase today?
- a. Fresh fruits and vegetables
 - b. Baked goods (breads, cakes, etc.)
 - c. Processed/prepared foods (salsa, jams, pot pies, etc.)
 - d. Other

What did you purchase (or will you) today?

A. Fresh fruits & veggies:

B. Baked Goods:

C. Processed/prepared foods (salsa, jams, jellies, etc.):

D. Other:

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